



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,990	04/24/2000	KENICHI NAKAMA	Q58939	7259

7590

04/16/2003

SUGHRUE MION ZINN
MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20037

EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT

PAPER NUMBER

1772

17

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-17

Office Action Summary

Application No.

09/529,990

Applicant(s)

NAKAMA ET AL.

Examiner

Alicia Chevalier

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

RESPONSE TO AMENDMENT

REJECTIONS REPEATED

1. The 35 U.S.C. 102 rejection of claims 1, 2, 4, and 6 as anticipated by Andrus (5,212,596) is repeated for reasons previously of record in paper #8, page 3, paragraph #6.

Andrus discloses a nonreflective article comprising an outer layer with angle projections, an inner layer, and a substrate (figure 3). Both the outer layer and inner layer preferably comprise silicone (organopolysiloxane) (col. 5, lines 5-10). The height of the pyramids or ridges is typically less than 250 microns (col. 6, lines 36-37). Where the inner and outer layer are from about 10 to 250 microns (claims 6 and 7).

2. The 35 U.S.C. 102/103 rejection of claim 5 as anticipated by or over Andrus (5,212,596) is repeated for reasons previously of record in paper #8, page 4, paragraph #7.

Although Andrus does not explicitly teach the limitations the coefficients of linear expansion of the respective layers change gradationally from the substrate toward the outermost layer, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. organopolysiloxane) used to produce the nonreflective article. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed coefficient of linear expansion would obviously have been provided by the process disclosed by Andrus. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

Art Unit: 1772

3. The 35 U.S.C. 102 rejection of claims 1-4, 6 and 7 as anticipated by Tomono et al. (5,377,044). is repeated for reasons previously of record in paper #15, pages 2-3, paragraph #6.

Tomono discloses a diffraction grating device comprising a transparent protective substrate, an adhesive layer, a silicon oxide layer, a light reflecting film, and a thin relief type resin pattern layer (figure 2). The resin pattern layer is made of a polymerization curing type resin such as a silicone (organopolysiloxane) type resin and has a thickness on the order of 0.1 μm – 50 μm (col. 2, lines 55-65). The adhesive layer is preferably a silicone-type (organopolysiloxane) flexible adhesive and can have a thickness of 200 μm (col. 4, lines 34-36 and col. 7, lines 10-11). The protective substrate may be made of glass (col. 4, line 40). The resin pattern layer comprises grooves (angle) with a depth of 0.12 μm (col. 6, line 58). As can be seen in figure 2 the light reflecting film conforms to the resin pattern layer. The ratio of thickness of the thickest layer to that of the thinnest layer of the two silicone (organopolysiloxane) layers is 4 to 2000.

4. The 35 U.S.C. 102/103 rejection of claims 5, 8-10, 11, 17 and 18 as anticipated by or over Tomono et al. (5,377,044) is repeated for reasons previously of record in paper #8, page 4, paragraph #7.

Although Tomono does not explicitly teach the limitations the coefficients of linear expansion of the respective layers change gradationally from the substrate toward the outermost layer, the gradationally change in refractive index from the substrate toward the outer most layer, the relationships set forth in claims 9, 10 and 17, or wherein the transmitted light has a wavelength from 380 to 2000 nm, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. two

layers of organopolysiloxane and a transparent glass substrate) used to diffraction grating device. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed coefficient of linear expansion, relationships, and transmitted light would obviously have been provided by the process disclosed by Tomono. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

ANSWERS TO APPLICANT'S ARGUMENTS

5. Applicant's arguments filed in paper #16 regarding the Andrus (5,212,596) reference have been carefully considered but are deemed unpersuasive.

Applicant summarizes the invention as describe in the present specification, "a sol-gel method is used to separately mold layers provisionally to a gel state, and then the gels are superposed on each other. The superposed gels are then heated on a substrate, thereby completing the condensation polymerization of the organopolysiloxane, i.e., thereby completely solidifying the gels. By pressing the superposed gels against the substrate with the mold for the outermost layer during the reheating, the surface shape of the mold, including projections, can be transferred to the outermost layer, and a multiplayer-coated substrate with projections is formed." This summarization of the invention described in the specification is not commensurate in scope with the present claimed invention. Claim 1 recites, "a multiplayer-coated substrate comprising a substrate and united therewith two or more superposed layers which comprise an oranopolysiloxane and the outermost layer of which has projections, the projections having a dispersion of height of 1 μm or less." The limitations on which Applicant

Art Unit: 1772

relies (i.e. the sol-gel method) are not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable. It is advised that if Applicant believes that the sol-gel method of preparing the multiplayer-coated substrate adds unforeseen structural limitations and/or unforeseen properties not gained by alternate methods of making a multiplayer-coated substrate, the limitations regarding the sol-gel method should be added to the claims and a clear description pointing out how the language of the claims patentably distinguishes over the prior art because of the sol-gel method.

Applicant argues that because the method of making the substrate the projections have a reduced height and exceedingly high uniformity. Furthermore, the claimed multiplayer-coated substrate achieves an exceedingly high performance in respective applications. First, Applicant's arguments are not commensurate in scope with the claims, because the claims do not have any limitations directed to the method of making the article, which would give the substrate this exceedingly high performance. Second, Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. See MPEP § 2129 and § 2144.03 for a discussion of admissions as prior art. The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness."). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration.

Applicant argues that Andrus does not anticipate claim 1 because it does not disclose the recitation "projections have a dispersion of height of 1 μm or less." Applicant further argues that the phrase "dispersion of height of 1 μm or less" related to the relative height of the projections. "In other words, dispersion of height is the difference in height (L) between any two projections" referring to figure 3 and page 11, lines 9-16 of the specification. Page 11, lines 12-16 of the specification recites, "the dispersion of height of the projections of the outermost layer according to the invention is 1 μm or less. The term height of the projections of an outermost layer means the distance L shown in Figure 3." Figure 3 shows reference letter "L" as the difference between the height of the top of the projections and the surface of the non-projection portion of the layer 13. The Examiner can not find any support for Applicant assertion that the dispersion of height is the difference in height (L) between any two projections. It is the Examiner's position that the dispersion of height is the height of the projection as shown by reference "L" in figure 3, which has support in figure 3 and the specification, lines 12-16. In regard to the range on the dispersion of height range it is noted that the range disclosed by Andrus does encompass the range claimed by Applicant. A range is anticipated when an example in the prior art discloses a range which is within the claimed range. MPEP 2131.03 "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims ... In such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Applicant's are reminded that Attorney argument is not evidence.

Applicant further argues that Andrus fails to suggest, i.e., render obvious, the recitation “projections have a dispersion of height of 1 μm or less” in claim 1. The arguments regarding this limitation have already been addressed.

6. Applicant’s arguments filed in paper #16 regarding the Tomono (5,377,044) reference have been carefully considered but are deemed unpersuasive.

Applicant argues that Tomono, like Andrus, is silent with respect to the dispersion of height of its projections. The Examiner disagrees with this assessment Tomono specifically discloses the resin pattern layer comprises grooves (angle) (forming projections, see figure 1) with a depth (height) of 0.12 μm (col. 6, line 58). Tomono clearly discloses projections having a dispersion of height of 1 μm or less.

Applicant argues that Tomono does not relate to a sol-gel method at all. As stated above, this is not found to commensurate in scope with the claims because the limitations on which Applicant relies (i.e. the sol-gel method) are not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated of unpatentable.

Applicant concludes by summarizing the object of the present invention, which is “to solve problems particular to a sol-gel method. The problems in a sol-gel method involve two points: one is that a thick layer exceeding several microns is not formed by one operation, and another is that because of the using polycondensation by hydrolysis of raw materials, shrinkage is liable to occur at curing. The latter problem brings about a problem of dispersion of height of projections (or recesses).” This is not found to commensurate in scope with the claims because the limitations on which Applicant relies (i.e. the sol-gel method) are not stated in the claims. Furthermore, unless the method of making the substrate by the sol-gel method adds unforeseen

Art Unit: 1772

structural limitations and/or unforeseen properties not gained by alternate methods, the method of forming the product is not germane to the issue of patentability of the product itself. Further, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicant to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F.2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974). The determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 946, 966 (Fed. Cir. 1985) and MPEP §2113.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 1772

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139. The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays

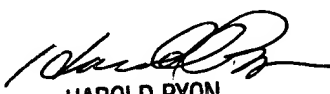
If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (703) 308-4251. The fax phone number for the organization official non-final papers is (703) 872-9310. The fax number for after final papers is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

4/9/03




HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772 4/11/03